

REMARKS

Claims 1-8 have been examined. Claims 1 and 5 have been amended. New claim 9 has been added. Reconsideration of the claims, as amended, is respectfully requested.

Claim rejections

Claims 1-8 have been rejected under 35 U.S.C. 102(b) as being anticipated by Green. This rejection is respectfully traversed in part and overcome in part.

As amended, independent claim 1 claims a pumping system comprising a pump barrel that is adapted to be placed into a well casing, and a plunger that is reciprocatably positioned within the pump barrel. The plunger has an open top end with a sharpened edge, a bottom end, and a traveling valve at the bottom end. A connector is coupled to the plunger below the top end and is configured to permit fluids to be moved upwardly through the connector and the plunger upon each downstroke of the plunger. Further, the plunger has an interior that is generally open from the top end to the connector. A rod is coupled to the connector and is translatable to reciprocate the plunger within the pump barrel using an upstroke and a downstroke. In this way, the top end of the plunger is adapted to direct particulate into the plunger and away from the pump barrel upon each upstroke, and the generally open interior permits fluids passing through the connector to travel up through the plunger and out the open top end to expel particulate from the plunger upon each downstroke so that essentially no particulate accumulates on the connector.

In contrast to the pumping system of claim 1, the Green patent describes a pump that is far different. In particular, the plunger 7 of the Green patent is not generally open above connection point 5. Instead, the pump of Green has a cup 6 to collect sand that is expelled from valve 4. With such a configuration, cup 6 will quickly fill with sand which will then accumulate at the interface of the plunger and the pump barrel. More specifically, since valve 4 is above the top end of the plunger, fluids expelled during the downstroke will not remove the accumulated sand from cup 6.

With the pumping system of claim 1, the plunger has a generally open interior so that the sand that is directed into the plunger on the upstroke is forced upwardly out of the

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plunger on the downstroke. In this way, sand does not accumulate within the plunger, and does not therefore accumulate at the interface between the plunger and the pump barrel.

Because the Green pump does not have a plunger with a generally open interior, it is incapable of directing particulate away from the interface between the plunger and the pump barrel as claimed in claim 1. Hence, claim 1 which has been amended to include such features is distinguishable. Claims 2-4 depend from claim 1 and are distinguishable for at least the same reasons.

Independent claim 5 claims a method for pumping fluids from the ground and has been amended to include limitations similar to claim 1. Hence, claims 5-8 are distinguishable from Green.

Claims 1-8 have also been rejected under 35 U.S.C. 102(e) as being anticipated by Nelson. This rejection is respectfully traversed.

Applicant initially wishes to note that Nelson does not appear to be prior art since broad support for the claims is found in Fig. 3 which has an effective filing date before that of Nelson. Even assuming, arguendo, that Nelson is prior art, the Nelson pump is far different.

More specifically, fluids in Nelson are pumped outside of the plunger. As such, Nelson does not have a plunger where fluids pass through the connector and up through the generally open interior of the plunger to remove particulate from the plunger upon each downstroke. Instead, with Nelson, particulate would accumulate within the cup below end 316 and would therefore move between the plunger and pump barrel upon each upstroke.

Because claims 1-8 claim a plunger which operates in a far different manner, claims 1-8 are distinguishable over Nelson. It is therefore respectfully requested that the section 102 rejection of these claims in view of Nelson be withdrawn.

Added claim

Independent claim 9 is identical to claim 1 as now amended, and includes the additional limitation that "the plunger has a tight fit with the pump barrel to prevent particulate from accumulating between the plunger and the pump barrel". Hence, claim 9 is distinguishable over the cited art for at least the reasons previously recited.

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In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,

A handwritten signature in black ink, appearing to be "Darin J. Gibby", written over a circular stamp.

Darin J. Gibby
Reg. No. 38,464

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
Tel: (415) 576-0200
Fax: (415) 576-0300
DJG:cll
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